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ABSTRACT

Based on an analysis of data from a survey of middle-class junior and senior high school youths in a New York City suburban community, this paper examined: (1) young peoples' reaction to various drug prevention programs in which they have been involved, and (2) the program topics they would like to see discussed. Important relationships were found to exist between substance use, prevention program evaluations and desired program topics. The results suggest that the youths selectively relate to and want prevention experiences that confirm their substance relationships. (Author)

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EVALUATION OF DRUG PREVENTION PROGRAMS BY YOUTHS IN A MIDDLE-CLASS COMMUNITY

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EVALUATION OF DRUG PREVENTION PROGRAMS BY YOUTHS IN
A MIDDLE-CLASS COMMUNITY

Recent years have witnessed the growth of programs designed to prevent individuals, particularly the young, from abusing various substances. This effort has been enhanced by the requirement of many state education departments that drug education be made part of the school curriculum.

The drug programs that have been developed vary in their mode of presentation and approach. Some programs have stressed formal means of presentation, such as assembly meetings and classroom instruction; others have emphasized informal methods, such as rap sessions and encounter/sensitivity groups. In terms of approach, three main thrusts are discernible in the drug prevention programs that have been developed. Initially, programs gave weight to the moral aspects of drug taking, pointing out how drug users were violating important social and ethical values by their behavior. This program stress gradually saw the rise of programs presenting scientific evidence in regard to the effects of using particular substances (cf. Brotman & Suffet, 1973). And, recently, this emphasis has given way to programs intending to provide people with alternative ways of gaining satisfaction and/or dealing with their problems rather than using drugs (cf. Dohner, 1972; Piorkowski, 1973). This latter interest reflects the growing concern noted in the Second Report of the National Commission on Marijuana and Drug Abuse (1973) and by others (cf. Brill, 1973), that more attention be addressed to the drug user than the substances he takes.

Developed out of a sense of urgency to deal with the problem of drug abuse, most prevention programs have not been marked by theoretical sophistication or efforts to evaluate their effectiveness (Abrams, Garfield and Swisher, 1973). In particular, there is a lack of systematic attempts

to examine the impact of prevention programs in terms of the reactions of specific target audience members (Abrams, 1973). A rational approach to drug prevention requires that theory and research be integrated in the development and improvement of programs. This emphasis is reinforced by recent research indicating that young people with different drug use patterns vary in their perceptions of the credibility of sources of drug information (cf. Smart and Fejer, 1972; Smart, 1972).

The main purpose of this paper is to explore individuals' perceptions of the effectiveness of drug prevention programs and the program topics they would like to see discussed. In this respect, the data will explore how, regardless of the intentions of program creators, the young people exposed to these experiences react to them in ways that confirm their drug relationships. In addition, the youths felt formal programs, such as school assemblies, to be ineffective in preventing drug use. On the other hand, rap sessions and talks by ex-addicts, which often employ an interactive format, are rated favorably. These results, together with the fact that a strong relationship was found to exist between personal and friends' use of substances, highlight an important distinction that must be made between drug education and drug prevention. Drug education is concerned with increasing pupils' knowledge about drugs. Drug prevention is directed at the development of interpersonal and emotional skills and values that prevent individuals from becoming involved with drugs in a dysfunctional manner. While formal programs may be useful for the purpose of drug education, effective drug prevention efforts require interactive experiences which serve to enhance emotional growth, problem solving ability and increase one's skills in relating to others.

Studies on individuals' use of the mass media have shown that people are not influenced by the content they are exposed to. Rather, they have

contact with and incorporate material that fits in with the values and activities that are important to them (cf. McQuail, 1969; Dembo, 1973). Previous prevention research has, further, suggested that, rather than reducing drug use, drug education/prevention programs may have either increased students' curiosity about drugs (cf. Mason, 1973) or their substance use (cf. Anonymous, 1973) or had no effect on drug attitudes and behavior (cf. Swisher, Warner & Herr, 1972; Weaver and Tennant, 1973). Deriving from this work are the two areas of exploration which inform the analysis of the data reported in the present paper:

1. Individuals who do not use drugs will feel that drug prevention programs deter people from using drugs. Alternatively, substance taking youths will feel that these programs have either encouraged drug use or have had no effect.

2. In regard to desired program topics, non-drug taking youngsters will wish for discussion of such themes as how using drugs is immoral or can damage one's physical health or family, which would confirm their non-drug use. Drug users, on the other hand, would want pragmatic topics, such as how one can live better with drugs or how to handle bad drug experiences, that are relevant to their particular situation.

The research reported in the present paper represents an attempt to study these issues among junior and senior high school youths in a suburb of New York City. The results reported are not intended to document or advocate the efficacy of any one method of drug abuse prevention. Rather, in examining the issues set out above, they summarize responses to three sets of questions addressed to a group of young people in a middle-class community: (1) What type of prevention programs have they been exposed to? (2) How effective do they feel these programs have been? and (3) What program topics would they like to be discussed? In light of these results, further analysis of the data suggesting the utility of a social context approach to implement prevention programs is undertaken.

METHODOLOGY

Oakdale[1] is a New York City suburban community. While this location was selected as the site for the survey on the basis of ease of access and sample characteristics, there is no a priori reason to suppose that it differs significantly in terms of its middle-class character from many communities in the county in which it is situated.

The questionnaire was developed by a team of New York State Drug Abuse Control Commission researchers, including a statistician, epidemiologists and prevention evaluation personnel. The instrument was pretested on several groups of young people before being used in the field. Our interests in constructing the questionnaire were to obtain baseline data on drug use patterns, social relationships, attitudes relating to substances, perceptions of, and evaluation of exposure to, drug prevention programs. Reflective of these concerns, separate sets of questions were developed or culled from previous research to gather the following: (1) demographic data, (2) frequency and recency of the use of eight categories of substances (alcohol, depressants, LSD or similar drugs, marijuana or hashish, narcotics, solvents, stimulants and tobacco), (3) estimated frequency of use of these eight substance categories by one's friends, (4) multiple drug use, (5) attitudes towards parents, peers and school, (6) the believability of various sources of information on drugs and resources to be used for help with a drug problem, (7) attitudes held in regard to the use of drugs and ways of dealing with the drug problem, (8) opinions as to risk-taking behavior, (9) awareness, involvement and evaluation of drug prevention programs and (10) desired drug prevention program topics. The survey was facilitated by the local Narcotics Guidance Council and the School Board, who were interested in formulating more effective drug education and prevention programs. Following approval of the School Board, arrangements were made with the junior and senior high schools to

administer the questionnaire. The instrument was given to the pupils of both schools on the same day in the Spring of 1974 and took one class period to complete.

Attendance - Completion Rates

Survey return rates indicate that, except for the 12th grade (in which a number of students attended a community volunteer program that was not related to their drug use), a large majority (85.9%) of the students enrolled in grades 7 to 11 participated in the survey. The total sample consisted of 682 young people. Table 1 gives these results.

(Table 1 About Here)

Relevant research suggests that individuals with irregular attendance at school are more likely to be drug users than those who regularly attend and participate in school (cf. Roth, 1972; Lavenhar, Blum, Quiones, Einstein and Louria, 1972). The drug use data that were obtained in this study, therefore, should be regarded as conservative estimates of the usage behavior among the schools' students. Given this limitation in terms of the generalizability of the data, it is important to note that few refusals to participate were encountered among students who were approached to complete the questionnaire. Except for 12th grade, where 23% of the youngsters present in class declined to cooperate, all grades had completion rates at or near 100%. We were unable to determine the reasons accounting for these refusals. This high completion rate was facilitated by efforts that were taken to assure the confidentiality of the data. Students were asked not to write their names, or in any other way identify themselves on the forms. Further, they were provided with seals to secure their responses from the observance of individuals other than the researchers.

Community Context

No information was available in regard to drug use or misuse patterns existing in Oakdale at the time the survey was carried out. However, the

questionnaire contained two items probing student perceptions as to whether they felt: (1) there was a drug problem in their school and (2) teachers and school officials thought there was a drug problem. Results showed that 31.6% and 38.3% of junior (grades 7 and 8) and senior (grades 9-12) high students, respectively, believed that there was a drug problem in their schools. Further, 43.6% of the junior high youths, and 46.9% of the senior high school students, were of the mind that teachers and school officials felt there was a drug problem in their schools. We have no knowledge as to whether this perceived opinion was shared by school personnel, the general community or its leaders. The support of the School Board for our research can, however, be considered a reflection of its concern to at least assess the drug use situation among the pupils we surveyed.

Description of the Sample

The data show a near equal representation of boys (53%) and girls (47%) in the survey, and indicated their intact family situation with 86% of the respondents reporting they resided with both parents. The strong middle-class character of the community is underscored by the fact that 48% of the pupils' fathers and 39% of their mothers had either graduated from college or attended graduate or professional school. In line with these results, 55% of the youngsters' fathers were noted as having professional or owner/managerial positions, 29% sales, clerical or service occupations and only 5% semi - or unskilled jobs.

In addition to questions probing multiple drug use, the drug items tapped the frequency of the use of the following categories of substances: (1) alcohol, (2) marijuana/hashish, (3) depressants, (4) L.S.D. or similar substances, (5) narcotics, (6) solvents and (7) stimulants.[2] Analysis of the data uncovered little use of categories 3 through 7. However, a majority of the youngsters surveyed claimed to have used alcohol (66%), and twenty-nine percent marijuana/hashish, during the six month period prior to the survey.

Convergent with previous research, there was a significant, positive relationship among school grade (age), frequency of alcohol and marijuana/hashish use and multiple drug use behavior (cf. Whitehead, 1970; Babst and Brill, 1973). Sex and father's education and occupation were not related to drug usage.

EXPERIENCED AND DESIRED DRUG PREVENTION PROGRAMS

Students were asked to indicate which of eleven drug prevention programs they had attended or participated in during the year before the survey was administered. Table 2, which sets out these results by grade, highlights the claimed differential involvement of the youngsters in these prevention activities.

(Table 2 About Here)

Claimed participation was heaviest in formal, structured and less personal types of presentations (school assemblies, classroom instruction and films), with pupil attendance ranging from 31% to 45%. Encounter/sensitivity training, after school centers, individual/group/family counseling, police programs, button and/or poster programs, rap sessions, church programs and talks by ex-addicts represented areas of secondary stress (with participation running from 1% to 22%). School assemblies, classroom instruction and films which may be included in the former two formats and are required by the school are likely to have more student participants than programs of a more voluntary nature. In this vein, the data indicate that out of school programs, such as church and police programs and after school centers, attracted fewer young people. Overall, the results in Table 2 note the lack of emphasis on interpersonal prevention formats, such as rap sessions, encounter/sensitivity groups and individual/group/family counseling in the youths' prevention program experiences. Difficulties in recall and curriculum variance by grade are also reflected in these figures. We were unable to determine the

extent to which two or more program formats may have been used together. Accordingly, each format has been separately analyzed.

Since not all students answered the eleven program participation questions, further analysis was necessary to determine whether there were significant drug use and/or demographic differences in response to these items. The results did not show any strong differences in frequency of alcohol, marijuana/hashish and/or multiple substance use behavior between students who reported participation in the programs and those who did not. Further, there were no significant differences in participants' and non-participants' sex, fathers' education or fathers' occupation. Because it is not possible to determine the reasons for attending the various programs, we must be cautious in providing any interpretation to these findings.

A significant positive relationship was found between grade and (1) claiming non-participation in the drug prevention programs ($F=12.51$, $P<.001$) and (2) not responding to the items ($F=8.09$, $P<.01$). However, the fact that no significant differences in program involvement were found among youths having varying alcohol, marijuana/hashish and multiple drug use relationships, provides a statistical basis for separate analysis of their evaluation of the prevention programs in which they participated. Because the small number of individuals attending some of the prevention programs precluded more detailed analysis, only programs with an overall participation rate of 10% or more were studied.

Perceived Effectiveness of Drug Prevention Programs

The survey contained questions asking respondents to assess whether they felt each of the drug prevention programs they had participated in: (1) helped turn young people away from drugs, (2) had no effect or (3) encouraged young people to turn to drug use. A "don't know" reply category

was also included. Examination of the effectiveness ratings was accomplished by comparing the evaluations given by students with varying alcohol, marijuana/hashish and multiple drug use behavior. Due to the small number of cases involved in many of the cross-tabulations of the frequency of alcohol and marijuana/hashish data, these two variables were dichotomized as follows:

a. frequency of alcohol use - students claiming never to have tried alcohol or not to have used the substance during the six months prior to the survey were compared with those indicating they drank on one or more occasions in the half year before completing the questionnaire[3], and

b. frequency of marijuana/hashish use contrasted pupils who had never tried either of these substances with those indicating they had used them one or more times.

The multiple drug use comparisons contrasted youths who never or ever had: (1) used a substance (except tobacco) and alcohol so both affected them at the same time, or (2) taken any substance (except tobacco) when another was having its effect.

Overall, from 16% to 22% of the youngsters who participated in the six prevention program types indicated that they could not assess their impact. Differences in these responses for the various comparison groups were small for most of the programs; many of the percentages were based on too few cases to allow further statistical analysis. Contrary to the findings of Anonymous (1973) and concern expressed by Zimmerman (1973), these attitudinal data uncovered very few respondents who felt that any of the six programs encouraged young persons to use drugs. The overall percentages of pupils feeling this way ranged from 1% to 6% and were based on too few cases to permit confident relative judgments. It is possible that the involuntary or voluntary nature of students' attendance in the six programs may have influenced their assessments of their effectiveness. Unfortunately, however, we have no data bearing on this issue.

More important comparisons are provided by studying the program

evaluations given by youths claiming various substance using behaviors, in regard to whether the programs were perceived as turning young people away from drugs or having no effect. Out of the twenty-four comparisons, 8 (33-1/3%) were significant, as against one significant finding which might, on the average, occur by chance. Overall, the results showed that respondents who were more involved with substances (i.e., recent alcohol use, previous use of marijuana/hashish or use of two or more drugs at one time) tended to judge films on drugs and classroom instruction as having no effect on drug use; pupils claiming to use drugs less often or never were more likely to feel these programs helped turn young people away from drugs.[4] The youths' evaluation of films on drugs is very clear in this regard, as Table 3, part 1 shows. The classroom instruction results, set out in part 2 of Table 3, indicates this trend more strongly for substance takers than non-users. These data suggest that students exposed to impersonal, one-way communication programs will relate to them in ways that confirm their drug relationships. There is a consistent tendency for students who don't use substances to feel these programs prevent drug use, while drug users believe they have no effect.

(Table 3 About Here)

No consistent differences in program evaluation were found between substance users and non-users in regard to school assemblies, talks by ex-addicts, rap sessions and church programs. Marijuana/hashish users, however, were more inclined than non-users to feel assemblies had no effect ($X^2=4.30$, $df=1$, $P<.05$). Most youths felt talks by ex-addicts and rap sessions helped turn young people away from drugs and that assembly programs had no effect. There was no clear trend pro or con in response to church programs. Because of the lack of significant relationships, these tables have not been presented.[5]

Although this study had no way to measure the behavioral impact of any of the drug prevention programs, it is important that the two most frequently attended programs were not judged to have much effect by the various substance users (a critical target group) in our survey. School assemblies fared badly for both users and non-users. Talks by ex-addicts and rap sessions, which often use an interactive format, are perceived favorably by this sample. We have no specific information as to the reasons these programs were perceived positively or negatively by the students.

Desired Drug Prevention Program Topics

The research was also directed at determining the program topics the students desired. To this end, the questionnaire contained items probing the students' preference for various program themes, or as we asked: "Which of the following programs would you like to have?" - (1) explain the dangers to physical health, (2) discuss how taking drugs affects your mind, (3) explain how you can live better with drugs, (4) explain why drug use is immoral, (5) explain the legal penalties for using drugs, (6) explain other things to do besides use drugs, (7) explain scientific information about drugs, (8) explain how to handle bad drug experiences, (9) explain different treatments for drug experiences and (10) explain how using drugs can damage your family.

A number of respondents did not answer one or more of the program topic questions, raising the possibility of bias in student responses to them. Non-responses were fairly evenly distributed among the program preference items. Analysis was made of those who didn't answer these questions and results showed that 85% of the youths answered all ten questions. Analysis of variance found no significant differences to exist between answerers and non-answerers to the desired drug prevention topics questions. In an effort to tap any response sets in the data, a further analysis probed whether no

answer to one question was significantly related to a similar reply to another. Again, no consistent differences in question response patterns were uncovered. The results gave considerable confidence that pupils answering and not answering the preferred program topic items were similar demographically and in their drug use and were not indiscriminate or biased in their replies to the questions. This provided a statistical rationale for subsequent study of the data, which excluded the no answers from consideration.

Ranging from 49.6% to 71.3%, most of the students surveyed were interested in pragmatically-oriented prevention programs discussing how drugs can damage one's family, explaining scientific information about drugs, other things to do besides using drugs, different treatments for drug problems, how to handle bad drug experiences, the physical dangers of using drugs, the legal penalties of drug use and how taking drugs affects your mind. The two value-oriented program themes, how you can live better with drugs and why drug use is immoral, were desired by less than 30% of the respondents. There was a small, but consistent proportion of no responses to these questions. Table 4 gives these findings.

(Table 4 About Here)

Of considerable interest are the drug program topics desired by students with varying drug use characteristics, which are set out in Table 5.

(Table 5 About Here)

The findings shown in Table 5 are illuminating in several respects. Significantly, users of alcohol, marijuana/hashish and, to a large degree, poly drug users do not want drug education programs that explain: the physical dangers entailed in using various substances, how taking drugs affects one's mind, why drug use is immoral and how using drugs can damage

one's family. Conversely, pupils who do not use drugs would like these program topics. On the other hand, substance taking youths would like to be exposed to programs that explain how: (1) one can live better with drugs, and (2) how one can handle bad drug experiences. Non-users do not wish to have these themes discussed. There are no differences between the users of alcohol, marihuana/hashish and combinations of substances in their desire for programs explaining scientific information about drugs.

The modest to low correlations involved in the relationships reported in Table 5, while statistically significant, do not provide conclusive results. The pattern of correlations does, however, suggest that the values and attitudes relating to extent of use[6] of particular substances bias pupil program interests in ways that are consistent with their drug use behavior. Our results encourage examination of this hypothesis in further inquiries involving different samples of young people.[7]

Several of the students' demographic characteristics, especially school grade (age), were mutually associated with their drug behavior and desired program topics. Accordingly, further analysis was undertaken to control for their influence in the drug use program topic relationships that were found. The results show that although the strengths of the correlations shown in Table 5 were reduced or increased in a number of instances, the associations previously discussed remain statistically significant. When a factor analysis was performed on these data, the results were somewhat inconclusive. The drug use items tended to be separated out in the factor analysis. This finding is not unexpected in that the drug use items were highly inter-correlated with each other.

DISCUSSION AND SUGGESTED THRUSTS FOR DRUG ABUSE PREVENTION

Our findings suggest that with the exception of rap sessions and talks by ex-addicts, the youngsters surveyed are not impressed by the drug abuse

prevention programs to which they claimed to be most often exposed. Ex-addicts can give a double message to the young by denying the value of the drug life while at the same time colorfully describing and using their experience as a basis for their expert status. However, they do represent a non-institutional source with whom young people can identify.

While films on drugs and classroom instruction may serve to confirm non-users' avoidance of drugs, they are judged as having little effect by substance users. These results, together with the data pointing to the youths' selective bias in desiring program topics that fit into their particular substance use behavior, suggest the limitation of traditional drug prevention efforts designed to alter person-drug relationships. The involuntary or voluntary nature of the students' participation in these programs may have influenced judgments of their impact. At any rate, the present findings suggest that drug use and the beliefs and values supporting this activity, cannot be easily changed by assembly programs, classroom instruction or similar formal efforts.

If, as the results suggest, non-drug using or infrequently using youths are likely to endorse standard drug prevention efforts while drug-using youths find them ineffective, how can prevention programming be changed to take this fact into account? One way is to have the content of drug prevention material for audiences which include substance users and non-users contain information that is supportive of the views of both groups.

In contrast to the present formalistic emphasis, our findings urge that Oakdale's drug prevention thrust would be well advised to pursue interpersonal means of behavior and attitude change. This needed emphasis is underscored by the experience of drug experts (cf. Brill, 1973) and previous research (Wechsler & Thum, 1971; Johnson, 1973; Kandel, 1973; Knight, Sheposh & Bryson, 1974) showing a strong relationship to exist between

friends' and personal use of drugs. Consistent with these findings, the present survey, for example, uncovered a strong association existing between friends' and respondents' use of alcohol and marijuana/hashish as Table 6 shows.

(Table 6 About Here)

The data in Table 6 highlight the importance of using the social context of drug use as a frame of reference in the development of drug prevention programs. Regardless of their intended impact, the influence of drug prevention programs will be mediated by the interpersonal affiliations of the young persons who are exposed to them. Programs which have the support of valued peers are more likely to be successful than those in conflict with the beliefs and activities of peers (cf. Swisher, Warner & Herr, 1972). To be effective, these efforts must articulate the important experiences young people have in their environment. Prevention programs must be able to address youths' relationships with drugs in a way that reflects awareness of the motivations, relationships and symbolic meanings they hold in regard to this behavior, and not the presumptions of adult program creators reacting to the existence of drug use. This inference is borne out by a survey completed in Maryland, showing that high school students get most of their information and beliefs in regard to drugs from their friends (Montgomery County Joint Advisory Committee on Drug Abuse, 1970). In this vein, drug prevention programs that involve students and their peers in curriculum development and presentation seem especially promising (cf. Capone, McLaughlin & Smith, 1973; Wenk, 1973). This effort should include training in the development of social and personal problem solving skills that can discourage drug use. In addition, this activity would constitute an exercise in prevention in its own right.

It remains to be determined to what degree prevention efforts in a community will be more successful if they harness peer influences to alter

young peoples' use of particular substances or if an effort is made to withdraw youths from networks which might support or encourage drug use.

Deciding upon an optimal application of these strategies requires information in regard to the personal, social and drug-risks pertaining to the substance relationships in a given setting. It is conceivable that both will be pursued among various groups.

Optimally, any drug prevention program needs to be informed in regard to the substance relationships of particular target audience members. Such a data base could be provided by periodic assessments of the drug use rates in particular populations by means of confidential surveys. Furthermore, program planners should be aware of the range of drug involvements existing among various target populations. They should learn how many individuals are primarily experimenters or social-recreational users as against persons to whom drugs represent a central factor in their lives. For example, data from the present survey suggest that most of the respondents claiming to use alcohol and/or marijuana/hashish do so in a controlled manner. This is evidenced by the fact that only 1% and 7% of the students indicated they had taken alcohol or marijuana/hashish, respectively, one or more times a day during the six-month period preceding the survey. Accordingly, our findings must be judged with reference to these use patterns.

Thus far, our comments have been directed to one side of the drug relationship picture. Although they represented an unknown quantity in terms of our study, youths who do not regularly attend school are a key target audience for prevention efforts. These students are more prone to be dysfunctionally involved with drugs and are difficult to involve in school-based prevention activities. The engagement of youths who are disinterested in school is a task requiring creative drug prevention programming (cf. Fernandez, 1973). Efforts to develop prevention programs to reach

these young people should be based on field observation (cf. Wald & Abrams, 1972). That is, playgrounds, favorite street corners and recreational centers should be used as contact points from which to attract youngsters into prevention programs. This work should be pursued with the collaboration of persons in the neighborhood who are well regarded by the young people concerned.

The recognition of diverse drug behavior patterns and the reasons encouraging and sustaining substance use among different sections of the youth population affects the success of drug programs. How prevention programs will look for any given group remains to be determined. They should reflect, among other factors, the drug use and social-cultural patterns that are particular to a given community, family substance use behavior and the prior histories of particular target groups. The results of our study suggest that those efforts which seek to work through the interpersonal networks of young persons will be a more productive investment for the drug prevention worker, than the use of traditional, formal prevention vehicles. As we report elsewhere, the networks of social relationships reinforcing drug use among young people may be mistrustful of parental and institutional-medical representatives as sources of information about drugs and as resources to be approached for assistance with a drug problem (Miran & Dembo, 1974). Our empirically informed suggestions confirm the experience of drug professionals, who have found little impact to result from the enormous investment in manpower and expense that has been made in one-way modes of prevention through pamphlets, lectures and films (cf. National Advisory Commission on Criminal Justice Standards and Goals, 1973). They, further, reflect an awareness of the social, psychological and cultural factors which are predominant among the influences leading to young persons' involvement with the abuse of various substances (cf. Wald

and Abrams, 1972; Second Report of the National Commission on Marijuana and Drug Abuse, 1973; Dembo, 1974).

Thus far our conclusions have focussed on the benefits young people could be expected to derive from drug prevention programs that are premised on their interests and important reference groups. Attention also needs to be addressed to the larger community in which the youths reside. Here research should seek to uncover the ways in which citizens and community leaders respond to the feedback of the results of school drug surveys. A concern for revamping existing drug prevention programs, as well as the development of new efforts, is of interest. More important, however, is the need to assess changing levels of awareness of the drug relationships of young people - including the ways in which adults and youths are interconnected with this issue. An inquiry into the community consequences of the present study is planned. Perhaps the ultimate yield from community discussion of drug surveys rests in underscoring the responsibility all citizens have in promoting a quality of life which would obviate the need for persons to establish harmful substance relationships.[8]

FOOTNOTES

1. The name is fictitious.

2. Although questions were asked in regard to tobacco use, these data have not been included in the analysis reported here.

3. These data may include some instances of religious use.

4. Because the sample was not a probability sample, use of the statistical model, strictly speaking, does not apply. However, the model was employed as a heuristic device to compare the results with that of a random model to assist in locating significantly appearing relationships and patterns.

5. Tables reporting these results, as well as any others discussed in this paper, are available upon request from the authors.

6. When the original categories of the dichotomized drug use variables were examined, they confirmed the linear thrust of these reported significant relationships.

7. It is, further, impressive that 39 of the 40 (97.5%) of the relationships between drug use and desired program topics are in the predicted direction and that 22 (55.0%) of these correlations are statistically significant. Due to the respectable correlations among the drug use variables, it is not appropriate to calculate non-parametric measures of association, such as the sign test.

8. We would like to thank the community's school administration for permitting the survey to be carried out, and Jim Schmeidler for his statistical assistance and insightful comments on an earlier version of this paper. The efforts Dean Babst and Mary Koval put into constructing the questionnaire and gathering the survey data are appreciated.

TABLE 1

ENROLLMENT AND SURVEY COMPLETION RATES BY GRADE

Grade	Enrollment	Present in Class on Day of Survey	Percent Present of those Enrolled	Returned Completed Questionnarie	Percent Completed of those Present	Percent Completed of those Enrolled
7th	147	132	89.8%	132	100.0%	89.8%
8th	131	118	90.1%	118	100.0%	90.1%
9th	173	153	88.4%	153	100.0%	88.4%
10th	138	109	79.0%	109	100.0%	79.0%
11th	147	122	83.0%	120	98.4%	81.6%
12th	95	65	68.4%*	50	76.9%	52.6%
Total	831	699	84.1%	682	97.6%	82.1%

* Many seniors were involved half days in a community volunteer program, and, accordingly, were not available at the time of the survey.

TABLE 2

GRADE BY ATTENDANCE/PARTICIPATION IN DRUG PREVENTION PROGRAMS IN PAST YEA

Participation in Program

Grade	School Assembly Program	Classroom Instruction	Rap Session Groups	Encounter/ Sensitivity Training	Individual/ Group/Family Counseling	Church Program	After-School Center	Police Program	Buttons Games Poster grams
7th	36.4%	68.2%	14.4%	0.8%	6.8%	18.2%	3.8%	20.5%	13.6%
8th	24.6%	47.5%	12.7%	1.7%	8.5%	9.3%	3.4%	6.8%	13.6%
9th	30.1%	22.9%	7.8%	1.3%	6.5%	9.2%	2.0%	9.2%	11.1%
10th	30.3%	14.7%	5.5%	-	5.5%	9.2%	0.9%	3.7%	2.8%
11th	35.3%	51.3%	12.6%	2.5%	2.5%	7.6%	1.7%	5.0%	7.6%
12th	36.0%	50.0%	16.0%	--	8.0%	4.0%	4.0%	2.0%	2.0%
Overall Participation	31.7%	41.5%	11.0%	1.2%	6.2%	10.3%	2.5%	8.8%	9.4%

TABLE 2

E BY ATTENDANCE/PARTICIPATION IN DRUG PREVENTION PROGRAMS IN PAST YEAR

	Participation in Program								
sion ups	Encounter/ Sensitivity Training	Individual/ Group/Family Counseling	Church Program	After-School Center	Police Program	Buttons, Games Poster Programs	Talks by Ex-Addicts	Films on Drugs	Number Completing Questionnaire
4.4%	0.8%	6.8%	18.2%	3.8%	20.5%	13.6%	37.1%	64.4%	132
2.7%	1.7%	8.5%	9.3%	3.4%	6.8%	13.6%	15.3%	44.9%	118
7.8%	1.3%	6.5%	9.2%	2.0%	9.2%	11.1%	18.3%	33.3%	153
5.5%	-	5.5%	9.2%	0.9%	3.7%	2.8%	11.0%	27.5%	109
2.6%	2.5%	2.5%	7.6%	1.7%	5.0%	7.6%	30.3%	56.3%	120
6.0%	--	8.0%	4.0%	4.0%	2.0%	2.0%	14.0%	42.0%	50
1.0%	1.2%	6.2%	10.3%	2.5%	8.8%	9.4%	22.0%	45.0%	682

TABLE 3

EVALUATION OF THE EFFECTIVENESS OF MOST FREQUENTLY ATTENDED DRUG PREVENTION PROGRAMS BY USERS AND NON-USERS OF ALCOHOL, MARIJUANA AND MULTIPLE SUBSTANCES

1. Films on Drugs (45.0% Attendance)

Recent Substance Use	Helped Turn Young People Away From Drugs	Had No Effect	Encouraged Young People to turn to Drug Use	Don't Know	Total
Alcohol					
Not used in past 6 months	58.2%	25.3%	5.1%	11.4%	100.0%(N=79)
Used in past 6 months	39.5%	36.8%	5.8%	17.9%	100.0%(N=190)
Total	45.0%	33.5%	5.6%	16.0%	100.0%(N=269)
	X^2=5.28;df=1 P<.05				
Marijuana/Hashish					
Never Used	53.2%	29.2%	4.1%	13.4%	100.0%(N=171)
Ever Used	29.9%	41.2%	8.3%	20.6%	100.0%(N=97)
Total	44.8%	33.6%	5.6%	16.4%	100.0%(N=268)
	X^2=8.69;df=1 P<.01				
Used substance (except tobacco) and alcohol so both affected at the same time					
Never Used	52.1%	28.4%	5.3%	14.2%	100.0%(N=190)
Ever Used	20.3%	48.4%	9.4%	21.4%	100.0%(N=64)
Total	44.1%	33.5%	6.3%	16.1%	100.0%(N=254)
	X^2=15.82;df=1 P<.001				
Took substance (except tobacco) when another was still having its effect					
Never Used	48.4%	30.1%	6.4%	15.1%	100.0%(N=219)
Ever Used	15.6%	53.1%	6.3%	25.0%	100.0%(N=32)
Total	44.2%	33.1%	6.4%	16.3%	100.0%(N=251)
	X^2=10.52;df=1 P<.01				

TABLE 3 (Cont'd)

2. Classroom Instruction (41.5% Attendance)

Recent Substance Use	Helped Turn Young People Away From Drugs	Had No Effect	Encouraged Young People to turn to Drug Use	Don't Know	Total
Alcohol					
Not used in past 6 months	37.2%	37.2%	-	25.6%	100.0%(N=78
Used in past 6 months	25.3%	48.3%	2.8%	23.6%	100.0%(N=17
Total	28.9%	44.9%	2.0%	24.2%	100.0%(N=25
	X^2=350;df=1 P=N.S.				
Marijuana/Hashish					
Never Used	35.5%	36.8%	0.6%	27.1%	100.0%(N=16
Ever Used	17.4%	57.6%	4.4%	20.6%	100.0%(N=92
Total	29.1%	44.2%	1.9%	24.8%	100.0%(N=25
	X^2=11.29;df=1 P<.001				
Used substance (except tobacco) and alcohol so both affected at the same time					
Never Used	34.2%	39.7%	2.2%	23.9%	100.0%(N=
Ever Used	14.8%	63.0%	1.9%	20.4%	100.0%(N=
Total	29.8%	45.0%	2.1%	23.1%	100.0%(N=
	X^2=8.85;df=1 P<.01				
Took substance (except tobacco) when another was still having its effect					
Never Used	32.5%	41.5%	1.9%	24.1%	100.0%(N=
Ever Used	8.7%	69.6%	4.3%	17.4%	100.0%(N=
Total	30.2%	44.3%	2.1%	23.4%	100.0%(N=
	X^2 = 8.01; df =1 P < .01				

Table 4

DESIRED DRUG PREVENTION TOPICS

Topic	Yes	No	No Response	Total*
1. Explain dangers of using drugs to physical health.	63.3%	29.2%	7.4%	100.0%
2. Discuss how taking drugs effect your mind.	71.3%	22.1%	6.6%	100.0%
3. Explain how you can live better with drugs.	29.3%	62.2%	8.5%	100.0%
4. Explain why drug use is immoral.	28.2%	62.0%	9.8%	100.0%
5. Explain the legal penalties for using drugs.	69.2%	23.8%	7.0%	100.0%
6. Explain other things to do besides using drugs.	55.3%	36.1%	8.7%	100.0%
7. Explain scientific information about drugs.	51.9%	38.7%	9.3%	100.0%
8. Explain how to handle bad drug experiences.	62.8%	29.0%	8.2%	100.0%
9. Explain different treatments for drug experiences.	62.5%	28.7%	8.8%	100.0%
10. Explain how using drugs can damage your family.	49.6%	41.1%	9.4%	100.0%

*Percentages are based on 682 cases.

TABLE 5

CORRELATIONS (r) BETWEEN DRUG USE CHARACTERISTICS AND DESIRED DRUG PREVENTION PROGRAM TOPICS + (Ns in parenthesis)

Drug Use Behavior	Type of Drug Prevention Program Topic Desired									
	1 Explain dangers to physical health	2 Discuss, how drugs affect your mind	3 Explain how you can live better with drugs	4 Explain why drug use is immoral	5 Explain legal penalties for using drugs	6 Explain other things to do besides use drugs	7 Explain scientific information about drugs	8 Explain how to handle bad drug experiences	9 Explain different treatments for drug experiences	10 Explain how using drugs can damage your family
Frequency of Alcohol Use	-.203*** (N=584)	-.148*** (N=590)	.109** (N=579)	-.137*** (N=571)	-.064 (N=588)	-.084* (N=577)	-.060 (N=572)	.133*** (N=579)	-.052 (N=576)	-.167*** (N=572)
Frequency of Marijuana Use	-.183*** (N=584)	-.103* (N=590)	.204*** (N=579)	-.121** (N=571)	-.059 (N=588)	-.067 (N=577)	-.072 (N=574)	.133*** (N=578)	-.090* (N=576)	-.152*** (N=572)
Used Substances (except tobacco) and Alcohol so Both Affected At The Same Time	-.148*** (N=545)	-.117** (N=550)	.148*** (N=542)	-.084 (N=532)	.008 (N=547)	-.079 (N=538)	-.015 (N=532)	.088* (N=541)	-.063 (N=538)	-.157*** (N=535)
Took a Substance (except tobacco) When Another Was Still Having Its Effect	-.126** (N=540)	-.018 (N=545)	.191*** (N=536)	-.057 (N=526)	-.027 (N=542)	-.060 (N=533)	-.012 (N=527)	.041 (N=536)	-.080 (N=533)	-.142*** (N=529)

+ No responses have been excluded from these correlations. The variables used in this Analysis were coded as follows: frequency of alcohol and marijuana use: never used=0, not at all in last 6 month=1, use in last 6 months - less than once a month=2, more than once a month=3, more than once a week=4, one or more times a day=5; use of substances (except tobacco) and alcohol so both affected at the same time and took a substance when another was having its effect: no=1, yes=2; drug education program desired: no=1, yes=2

Two tailed test significance levels:

*p<.05
**p<.01
***p<.001

TABLE 6

FREQUENCY OF PERSONAL USE OF ALCOHOL BY FRIENDS' USE OF ALCOHOL*

Friends' Use of Alcohol	Frequency of Personal Use of Alcohol			
	Never	Used, but not in last 6 months	Used in last 6 months	Total
Often	34 11.3%	20 6.6%	247 82.1%	301 100.0%
Sometimes	45 17.1%	33 12.5%	185 70.4%	263 100.0%
Not at all	30 81.1%	-- --	7 18.9%	37 100.0%
Total	109 18.1%	53 8.8%	439 73.1%	601 100.0%

FREQUENCY OF PERSONAL USE OF MARIJUANA/HASHISH BY FRIENDS USE OF MARIJUANA/HASHISH*

Friends' Use of Marijuana/ Hashish	Frequency of Personal Use of Marijuana/ Hashish			
	Never	Used, but not in last 6 months	Used in last 6 months	Total
Often	42 21.4%	11 5.6%	143 73.0%	196 100.0%
Sometimes	140 63.0%	31 14.0%	51 23.0%	222 100.0%
Not at all	160 97.0%	5 3.0%	--	165 100.0%
Total	342 58.6%	47 8.1%	194 33.3%	583 100.0%

*Ns do not total 682, due to incomplete data in several cases.

REFERENCES

Abrams, L.A., Garfield, E.F. and Swisher, J.D., Accountability in Drug Education, (Washington,D.C.: The Drug Abuse Council, 1973).

Abrams, L.A., "Accountability in drug education." Contemporary Drug Problems, Fall 1973.

Anonymous, "Drug education no panacea." Crime and Delinquency, 19, 1973.

Babst, D.V. and Brill, L., "Drug abuse patterns among students in an upstate New York urban area." Journal of Drug Issues, Winter 1973.

Brill, L., Drug Abuse. Unpublished report, New York State Drug Abuse Control Commission, 1973.

Brotman, R. and Suffet, F., "Marijuana use: Values, behavioral definitions and social control." In: Second Report of the National Commission on Marijuana and Drug Abuse, Drug Use in America: Problem in Perspective (Washington, D.C.: U.S. Government Printing Office, 1973). Vol. I, Patterns and Consequences of Drug Use.

Capone, T., McLaughlin, J.H. and Smith, F., "Peer group leadership program in drug abuse prevention 1970-1971 academic year." Journal of Drug Education, 3, 1973.

Dembo, R., "Gratifications found in media by British teenage boys." Journalism Quarterly, Autumn 1973.

Dembo, R., "Issues in drug education." Medicine, Science and the Law, 14, 1974.

Dohner, V.A., "Alternatives to drugs: A new approach to drug education." Journal of Drug Education, 2, 1972.

Fernandez, L., "Can schools become a viable treatment modality for drug abuse?" Journal of Drug Education, 3, 1973.

Johnson, B.D., Marijuana Users and Drug Subcultures (New York: J. Wiley, 1973).

Kandel, D., "Adolescent marijuana use: Role of parents and peers." Science, September 1973.

Knight, R.D., Sheposh, J.P. and Bryson, J.B., "College student marijuana use and societal alienation." Journal of Health and Social Behavior, March 1974.

Lavenhar, M.A., Blum, R., Quiones, M.A., Einstein, S. and Louria, D.B., "Survey of drug abuse in six New Jersey high schools: II. Characteristics of drug users and non-users." In: S. Einstein and S. Allen (eds.), Proceedings of the First International Conference on Student Drug Surveys (Farmingdale, New York: Baywood Publishing Company, 1972).

Mason, M.L., "Drug education effects." Drug Education, 1973.

McQuail, D., Towards a Sociology of Mass Communication (London: Collier-Macmillan, 1969).

Miran, M. and Dembo, R., "The believability of sources of drug information and resources to be sought for help with a drug problem." (in preparation)

Montgomery County Joint Advisory Committee on Drug Abuse, Final Report (Maryland: March 10, 1970).

National Advisory Commission on Criminal Justice Standards and Goals, "Programs for drug abuse treatment and prevention." In the Advisory Commission's report volume: Community Crime Prevention (Washington, D.C.: U. S. Government Printing Office, 1973).

Piorkowski, G.K., "Drug education at its best - the shaping of values and anti-drug attitudes." Journal of Drug Education, 3, 1973.

Roth, R., "Student drug abuse in Southeastern Michigan and profiles of the abusers." In: S. Einstein and S. Allen (ed.), Proceedings of the First International Conference on Student Drug Surveys (Farmingdale, New York: Baywood Publishing Co., 1972).

Second Report of the National Commission on Marijuana and Drug Abuse, Drug Use in America: Problem in Perspective (Washington, D.C.: U. S. Government Printing Office, 1973).

Smart, R.G. and Fejer, D., "Credibility of sources of drug information for high school students." Journal of Drug Issues, Spring 1972.

Smart, R.G., "Rejection of the source in drug education," Journal of Drug Issues, Fall 1972.

Swisher, J.D., Warner, R.W., Jr. and Herr, E., "Experimental comparison of four approaches to drug abuse prevention among ninth and eleventh grades." Journal of Counseling Psychology, 19, 1972.

Wald, P.M. and Abrams, A., "Drug education." In: Drug Abuse Council, Dealing with Drug Abuse (New York: Praeger, 1972).

Weaver, S.C. and Tennant, F.S., Jr., "Effectiveness of drug education programs for secondary school students." American Journal of Psychiatry, 130, 1973.

Wechsler, H. and Thum, D., "The social context of drug use." New York Law Journal: Special Edition on Drugs, December 1971.

Wenk, E.A., Peer Conducted Research: A Novel Approach in Drug Education (Davis, Calif.: National Council on Crime and Delinquency, 1973).

Whitehead, P.C., "The incidence of drug use among Halifax adolescents." British Journal of the Addictions, 65, 1970.

Zimmerman, D.R., "Debate fueled: Drug education encouraged use." The Journal, 1, 1973.